



#### VIII. CLAIM APPENDIX

1. A method for charge storage device (CSD) customer driven charge storage device design comprising the steps of:  
providing more than one model of a charge storage device, the model adapted to convert at least one CSD customer inputted requirement selected from the group consisting of energy density, cycle life, rate capability, impedance, temperature range of operation and/or survival, safety requirements, storage life, self-discharge behavior, form factor, and cost into at least one CSD design;

providing an interface, the interface being adapted to pass the CSD customer inputted requirement to the model, the interface being adapted to pass CSD design from the model, and the interface being adapted to hide the model;

wherein the CSD customer addresses the interface with the CSD customer inputted requirement, the interface directs the CSD customer inputted requirement to at least one of the models, the model generates the CSD design that passes through the interface to the CSD customer.

2. The method of claim 1 wherein the model is selected from the group consisting of first principles' models, empirically-based models, and hybrid models consisting of

combinations of first principles' models and empirically-based models.

3. The method of claim 1 wherein the CSD customer inputted requirement further comprised a plurality of CSD customer inputted requirements.

4. The method of claim 1 wherein the CSD design further comprises a plurality of CSD designs.

5. The method of claim 1 wherein the model further comprises a database, the model and the database being in communication.

6. (Cancelled).

7. A method for charge storage device (CSD) customer-driven charge storage device design comprising the steps of:  
providing a CSD customer interface adapted for defining a CSD customer inputted test procedure for a desired charge storage device and defining a CSD customer inputted requirement for the charge storage device, the CSD customer inputted requirement being selected from the group consisting of energy density, cycle life, rate capability, impedance,

temperature range of operation and/or survival, safety requirements, storage life, self-discharge behavior, form factor, and cost;

providing a plurality of charge storage device models;

providing a routine capable of selecting at least one of the charge storage device models;

executing a simulation wherein the CSD customer test procedure, the CSD customer requirement, and the selected charge storage device model are combined to render a custom charge storage device design and the models are hidden from the CSD customer;

storing the custom charge storage device design; and  
outputting the custom charge storage device design.

8. The method of claim 7 wherein the selecting routine being adapted for either CSD customer selection of routine selection based upon, at least in part, the CSD customer test procedure and the CSD customer requirement.

9. The method of claim 7 wherein the model further comprises a sizing program and a performance program.

10. The method of claim 7 wherein the model further comprises a sizing program, a performance program, and an abuse program.

11. The method of claim 7 wherein executing a simulation further comprises the step of optimizing the simulation.

12. The method of claim 7 wherein outputting the custom charge storage device design further comprises the step of reporting the design.

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